

OBJECTIVE 2.18 Identify factors involved in skid control.

INTRODUCTION

When a vehicle's tires lose traction with the roadway surface, the vehicle is in a skid. Regardless of the geographic location, officers throughout the country have the potential of becoming involved in a skid situations.

Drivers erroneously believe that skids occur only in bad weather or while driving at high speeds. Emphasis should be placed on the fact that skids may occur during all types of driving: non-emergency, emergency, or pursuit. An officer on patrol may be distracted by a suspicious vehicle, and while looking at that vehicle, become surprised by the actions of another driver. This situation may force the officer to perform a drastic maneuver to avoid a collision, resulting in a skid.

There are many ways in which the driver, the environment and the vehicle can create a skid situation. It is important that officers be made aware of these factors and learn the skills needed to prevent or overcome a skid.

CONTENT

There are a number of different types of skids. This objective will cover:

1. Braking skids
2. Cornering skids
3. Power skids

1. BRAKING SKIDS

a. Conditions

- (1) One or more brakes lock up. The direction of travel will be dependent on the number and location of the wheels that lock up
- (2) There is loss of steering if front brakes are locked
- (3) There is an increase in the braking distance when one or more wheels are locked

- b. Examples of contributing factors:
 - (1) The driver brakes too late, or brakes too hard due to inadequate following distance, panic, or miscalculation
 - (2) The sun's glare blocks the driver's line of sight, resulting in a late brake
 - (3) The vehicle's brakes are improperly adjusted.
- c. Solution: Release a minimum amount of brake pressure just until the wheels unlock. Steer in the direction the vehicle is to go.

2. CORNERING SKIDS

a. Conditions

While trying to negotiate a turn or a curve, the vehicle exceeds the limitations of adhesion

b. Examples of contributing factors

- (1) The driver oversteers, understeers or approaches the turn too fast
- (2) The roadway is bumpy or is covered with loose debris
- c. Solution: Ease foot off the accelerator. Stay off the brake and steer in the direction the front of the vehicle is to go

3. POWER SKIDS

a. Conditions

- (1) The driver oversteers, overaccelerates, overbrakes
- (2) The roadway is covered with loose debris
- (3) The vehicle has too much weight behind the rear axle or poor shocks

- b. Solution: Stay off the accelerator and the brake. Steer in the direction the front of the vehicle is to go

SUMMARY

There are many ways an officer can become involved in a skid. The number of hours spent driving, the various weather conditions, and the distractions that the officer is faced with due to the nature of the job are just a few of these ways. By being made aware of these various skids and the methods for controlling them, an officer is more likely to be able to properly handle a skid situation.

SUGGESTED INSTRUCTIONAL METHODOLOGY**SMALL GROUP**

Divide students into three groups. Each group is assigned one of the components of the driving triangle; the driver, vehicle, or environment. Have each group develop a list of those factors that their component could contribute to causing a skid. Have each group report on their findings while the instructor lists these on the board. The list does not have to be all-inclusive. The instructor can comment as needed.

DEMONSTRATION

Using a small model car and a 2' x 3' piece of plywood, demonstrate the various types of skids. By wedging pieces of cardboard or paper in the wheels of the vehicle, the instructor can show the effects of a four wheel lock-up, two wheel lock-up, and so on. Reduced traction can be simulated by placing salt on the plywood to demonstrate the effects on the vehicle with reduced traction surfaces. Speed changes can be simulated by tilting the plywood at various angles.

RESOURCES AND AIDS

1. Accepted driver training textbooks
2. Driver training materials from traffic safety programs at the university or corporate level

SUGGESTED EVALUATION METHODOLOGY

STUDENTS

1. Written or verbal responses to questions on types and causes of skids
2. Written or verbal responses to questions on how to control a skid or recover from one

COURSE

Research officer collision data to determine if skid control is a significant causative factor in officer on-duty crashes

Skids

Accelerator Skid

- Accelerating during a turn
- Ease off accelerator and regain control

Cornering Skid

- Turning corner too fast
- Ease off accelerator
- Slowly straighten steering until directional control is regained

Braking Skid

- Locked brakes and loss of steering
- Ease pressure on brake pedal

Skid Control

Rear Wheel Sliding

- Second half of cornering maneuver
- Can be caused by over acceleration
- Rear tire spin – slide sideways
- Corrective action
 - Ease pressure on accelerator
 - Slowly straighten the steering wheel until control is regained
 - Steering equalizes vehicle sliding
 - Prepare for counter skid
- Regain control, accelerate smoothly